See 'Inside Marshall' for all move information

MARSHALL STAR

Marshall Space Flight Center — May 20, 1999

"We bring people to space — We bring space to people"

Town hall meetings set

Deputy Center Director Carolyn Griner will be holding a series of town hall meetings to collect input from employees and "help determine how to do business at Marshall," she said. The schedule for the meetings is as follows:

Thursday, 10-11:30 a.m., Bldg 4663, main conference room;

Friday, 9-10:30 a.m., Bldg. 4610, room 1054; and

Monday, 12:30-2 p.m., Bldg. 4203, room 1201.

Assoc. Administrator Rothenberg visits Marshall

by Debra Valine

NASA's Associate Administrator for Space Flight, Joseph H. Rothenberg, visiting Marshall Monday, was briefed on the Center's involvement in various projects, spoke to employees at an all-hands meeting and toured Marshall facilities.

He was briefed on the Center's restructuring, the Space Shuttle, the International Space Station, the Microgravity Program and Advanced Space Transportation. After the all-hands

*See **All-hands** on page 2*

Cloud says be ready

Moving plans set for high gear at close of business May 25

by Mike Wright

Twenty moving crews and additional teams of communications experts will fan out across the Marshall Center after the close of business on May 25. They will initiate one of the largest internal moves in the history of the Center.

"How can employees who are involved in the move help? They need to do one major thing: They need to be ready," says Sheila Cloud, director of the Center Operations Directorate. "When those movers and communications people arrive that afternoon, everyone should be completely packed.

"We can make this move happen. But it will take everyone's cooperation," Cloud said. The move will physically put in place the Center reorganization that Marshall Center Director Art Stephenson announced on Jan. 29.

Specific instructions for employees on how to prepare for the move are posted on the "Inside Marshall" Website. The Website includes safety tips, questions and answers, move schedules, organization points of contact and training opportunities that employees may attend May 26-28. "We are posting updated information constantly, so we encourage employees to check for any changes daily," Cloud said.

Be Safe

Employees moving to or from buildings 4201, 4202, 4203, 4487, 4610 or 4666 should plan to be completely packed by close of business (5 p.m.), Tuesday, May 25. For safety and efficiency reasons, only movers and move personnel wearing special identifiable clothing will be allowed in these buildings (except for access to the commercial services in Bldg. 4203) during the entire move period which will run throughout the Memorial Day weekend and the holiday on Monday, Cloud added.

The overall effort will involve 24-hour-a-day operations. The moving crews will work two shifts during daylight hours. Communications personnel will install telephones, fax machines, computers and other equipment at night.

Photo by Dennis Olive

Cloud, director, Center Operations

"Safety is paramount! Employees should not attempt to move furniture themselves," Cloud said. Employees may pack personal items in Marshall-provided moving boxes. "If you pack it in a sealed and properly labeled box we will move it. If you have personal items that are valuable or will not fit in a box, you may move them yourself or arrange to have them moved by contacting your move coordinator."

She said civil service employees

*See **Move** on page 4*

All-hands

Continued from page 1

meeting, he toured the Space Station Manufacturing and Assembly Facility, Payload Operations Integration Center, X-33 hydrogen tank test area and the Microgravity Development Laboratory.

Monday afternoon, Rothenberg spoke to employees at the all-hands meeting about Marshall's accomplishments over the past year, and emphasized the importance of continuing research and technology development. He thanked Space Shuttle managers for making the right decision to roll back the Shuttle for repairs last week saying it was "not an easy decision to make, but the right one."

Rothenberg drew parallels between a reorganization that took place while he was at Goddard Space Flight Center in Greenbelt, Md., when he was Center director there, and the one going on now at Marshall. He said we have to look at how we're conducting business now. The reorganization can be an effective tool to realign the Center to support critical mission areas, he said.

"The Goddard organizations grew over the years," Rothenberg said. "Organizations within the Centers did not talk to each other as well as they should have. We needed to reflect on this. I think the reorganization will make Marshall better for what will be going on in the future."

He reviewed Marshall's accomplishments for the past year, highlighting five Shuttle launches, two flights to the Russian Mir Space Station and research in space to combat disease and improve life on Earth. All the work that has been done in Advanced Space Transportation will help improve access to space, he said.

"There have been many milestones leading to advanced space transportation," Rothenberg said. "NASA Administrator Dan Goldin has made access to space and reduced cost to space a top priority — behind safety — for NASA." Flying the Shuttle safely and completing the Space Station are paramount to NASA's continued success, he said.

Rothenberg said he is looking to Marshall to lead advanced space transportation. "Access to space is the single most limiting factor in developing space. It costs commercial companies a fortune to launch their satellites. We are talking $10-20,000 a pound to get satellites up there. We hope — through the work being done here at Marshall — to get that cost down from $10,000 per pound to $1,000 per pound." Rothenberg said new technologies such as magnetic levitation that will be used with other new Spaceliner 100 technologies can make that happen.

Rothenberg also talked of the use of space in the future, and referred to the Space Station as the first outpost in space.

"We have had a great start with the Space Station," Rothenberg said. "We want to complete the Space Station in the next four or five years. The first outpost will be the Space Station." He said one of the reasons we have not been able to move out in exploration beyond Earth orbit is because we have to get the Space Station completed first. Once we do, we know we can start investing more beyond the Space Station.

"We are looking at a series of exploration outposts," Rothenberg said, for example, one on the Moon, Mars, an asteroid, a satellite, or Jupiter's moon Europa; start to put into place the means to eventually put humans on these outposts. I think we can set a stage much like the frontiers of the West. I think we can start seeing those outposts as early as 2002. We'll be allowed to start spending more money on technology and I think we will start to see these outposts mature."

The writer, a contractor employed by ASRI, is the Marshall Star Editor.

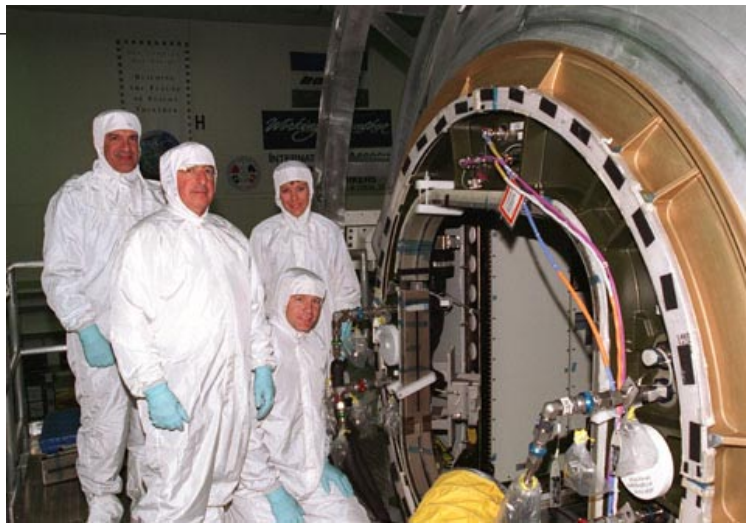

Photo by Doug Stoffer

Center Director Art Stephenson, Associate Administrator for Space Flight Joseph Rothenberg, and Kathy Nado, chief, legislative and public affairs for the Office of Space Flight, receive a briefing from a Boeing Co. representative at the Space Station airlock at Marshall.

10 employees receive awards at all-hands meeting

Center Director Art Stephenson and NASA's Associate Administrator for Space Flight Joseph H. Rothenberg presented awards to 10 Marshall employees following the all-hands meeting Monday.

Nine employees received the 40-year Length of Service Award. They are: Robert E. Austin, manager of the X-33 Program Office; Richard H. Beckham, Avionics Department, Engineering Directorate; Lott W. Brantley Jr., chief, Advanced Optical Systems Development Group; George D. Hopson, manager, Space Shuttle Main Engine Project Office; John E. Key, Space Shuttle Projects Office; Kenneth L. Reed Jr., Space Systems Chief Engineers Office; Axel Roth, director, Flight Projects Directorate; Sidney P. Saucier III, Center associate director; and Doyle W. Slaten, Facilities Services Office.

Rebecca C. McCaleb, director, Environmental Engineering and Management Office, was recognized for receiving an honorable mention in the Federal Environmental Engineer of the Year Award competition.

Turner named X-37 manager

Photo by Emmett Given

Susan Turner

Marshall's Susan Turner has been named project manager of the X-37 technology demonstrator, a small, winged rocket that will be carried into orbit by the Space Shuttle.

Turner will oversee a government and industry team developing the X-37, the third in a series of advanced reusable launch vehicle technology demonstrators intended to cut the cost of launching payloads into space from $10,000 to $1,000 per pound.

Photo by Doug Stoffer

Alumni meet

Ed Buckbee, president of the NASA Alumni League, left, Center Director Art Stephenson, center, and former Center Director Jack Lee socialize at the League's annual meeting May 14.

Photo by Emmett Given

31 years of Science and Engineering

Science and Engineering Directorate alumni attend the celebration of 31 years of the directorate May 13. Standing from left, former deputy directors Bob Schwinghamer, and George Hopson; and former director Bill Taylor. Seated from left are former directors Jim Kingsbury, Jim Odom and George McDonough.

Shuttle press kit available online

The press kit for the flight of Discovery on the STS-96 mission to the International Space Station is available online.

The press kit contains updated graphics as well as additional facts and statistics. Discovery is scheduled to launch from NASA's Kennedy Space Center, Fla., no earlier than May 27. It will carry seven crew members to visit the orbiting outpost in space and prepare the Space Station for the March 2000 arrival of the first resident crew.

The press kit can be found on the Web at:

http://www.shuttlepresskit.com/STS-96

Obituary

Richter, Michael L., 44, died May 10. He worked in the Flight Projects Directorate, Flight Systems Department, ECLSS Group. He was an AST Mission Support Regulator and Developer. He is survived by his wife Judy, son, Matthew, and daughter Lori.

Marshall Move '99

Use the move to adopt good housekeeping practices

by the Industrial Safety Office

With the mass move coming up May 26-28, many employees are getting a second chance at making a good impression. They are taking this opportunity to clean out work areas and dispose of excess paper and other articles.

Housekeeping in the workplace is important because it impacts day-to-day functioning. The negative impressions and implications of poor housekeeping can affect everyone.

Morale is lowered for most people who must function every day in a messy, disorderly work environment, although they may not be aware of the cause.

Safety is an even more critical issue. If your housekeeping habits are poor, the result may be employee injuries or loss of NASA property. How can such a "minor" issue have such serious consequences?

Results of poor housekeeping practices include:

• Injuries when employees trip, fall, strike or are struck by out-of-place objects;

• Injuries from using improper tools because the correct tool can't be found such as using scissors instead of a box cutter when opening boxes;

• Lowered production because of time spent maneuvering around someone else's mess or time spent looking for proper tools and materials;

• Time spent investigating and reporting accidents that could have been avoided;

• Fires due to improper storage and disposal of flammable or combustible materials and wastes such as the recent fire in Bldg. 4755.

General housekeeping rules to remember are:

• Keep file and desk drawers closed when not in use;

• Keep electrical cords, computer cables and other tripping hazards out of the aisles and open floor areas;

• Clean up after yourself. Pick up your trash and debris and dispose of it properly, or place it where it will not pose a hazard to others. Pick up items such as pencils or paper clips, and wipe up any spilled liquids. Institute a routine cleaning schedule;

• Keep your work area clean throughout the day. This will minimize the amount of time needed to clean a "larger mess" at the end of the day;

• Dispose of combustibles and flammables properly. If improperly discarded, they will increase the potential for a fire. Call the HELP line at 544-4357 for assistance;

• Stack materials and supplies in an orderly manner and secure them so they won't topple. A good rule is to not go above waist level.

Photo by Dennis Olive

Fawn Glenn, left, management support assistant, and Nancy Lovell, a contractor employed by Boeing North America, pitch in to clear away four tons of paper recently as the Space Shuttle Projects Office prepares to move. The group celebrated afterward with pizza.

Move

Continued from page 1

affected by the move should either attend the special training/orientation sessions posted on Inside Marshall, work at designated alternative work places approved by their supervisors, or elect to take annual leave. Contractor personnel will receive guidance through their respective management/supervisory channels.

All furniture moves/prepositioning will be completed before close of business on May 25. There are no plans to move furniture during the concentrated move period which begins after 5 p.m. on May 25 and continues until the opening of business on June 1. Any furniture adjustments not made before that time will be addressed after June 1. "As a general rule, only sealed boxes and packed vertical file cabinets with appropriate labels will be moved," Cloud said. "The movers also will move lateral file cabinets, but the contents will need to be removed and packed in boxes.

"This is a huge operation," she said. "We think people need to know what to expect when they go to their new work locations on June 1. First, they should have furniture and an operational computer and telephone with the same telephone number previously assigned to them. In addition, they should have the boxes that they packed and the file cabinets that belong to them. The success of this move depends on everyone working together, being prepared and remaining patient."

Employees not being relocated during the move period may experience some reductions in normal support services such as information technology, custodial, motor pool or logistics services, Cloud said. Food services will be available in Buildings 4203 and 4471, but will feature limited menus. However, the cafeteria in Bldg. 4610 will be closed. "If there ever was a team effort at Marshall, this is it," Cloud said of the move.

The writer works in the Internal Relations and Communications Office.

'Star Wars' propulsion drives soar toward reality

by Deana Nunley

Futuristic propulsion drives that send spacecraft streaking across the screen on "Star Wars" movies may leap from science fiction to scientific fact in the not-so-distant future.

Scientists and engineers at Marshall are developing propulsion technologies closely akin to the "hyperdrives" of "Star Wars" fame.

"Many of today's technological realities originally belonged to science fiction," said Garry Lyles, manager of NASA's Advanced Space Transportation Program at Marshall. "It's not unusual for science fiction to become reality, and it's exciting to see that transformation now in the space transportation arena."

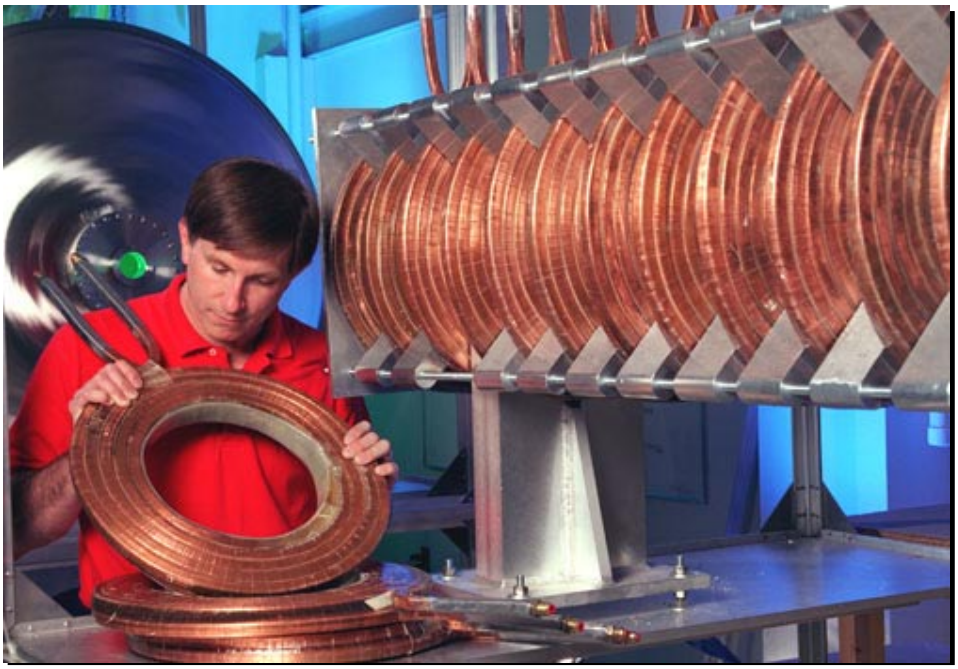

Photo by Doug Stoffer

Bill Emrich, principal investigator on the gas dynamic mirror fusion propulsion experiment, examines one of the magnetic coils which will power the experiment. Fusion propulsion is an exotic technology that crosses the line between science fiction and reality. Scientists and engineers at Marshall are developing a prototype fusion engine.

Fusion propulsion

The "Star Wars" "hyperdrive" gets its punch from fusion – an exotic propulsion technology being developed at Marshall. Fusion combines two or more atoms to form one heavier atom, releasing a tremendous amount of energy that could be used to drive a spacecraft. The energy efficiency of fusion compares to a car traveling 7,000 miles on one gallon of gas.

"Prodigious amounts of energy will be required to go to the outer planets, let alone other star systems," said George Schmidt, deputy manager of Marshall's Propulsion Research Center. "Achieving the level of technology portrayed in 'Star Wars' is quite a challenge. It will require very powerful fission, fusion or antimatter-driven rockets for rapid travel within interplanetary space."

Physical limitations

Schmidt said it also would require overcoming the physical limitations of space itself in order to travel faster than the speed of light. "We're examining a variety of propulsion technologies which will help us conquer the incredible challenges of interplanetary and even interstellar travel," said Schmidt. "We're convinced that several of these technologies will likely transform the space travel seen in sci-fi movies into real-life experience."

Marshall also is experimenting with futuristic concepts of launching rockets to space on laser beams and propelling sails through space with sunbeams – just as the wind pushes sailboats on Earth. "Laser propulsion and antimatter have long been the stuff of science fiction," said Lyles, "and now we're experimenting with them as viable options for space travel."

Antimatter annihilation

Because of its superior energy density, antimatter annihilation is often suggested as the ultimate source of energy for propulsion. Antimatter is identical to matter except that the electrical charges are reversed. A proton is positive, whereas an antiproton is negative. When regular matter collides with antimatter, they annihilate and produce phenomenal energy. In an antimatter engine, the charged particles would be channeled out the back of a spacecraft to produce thrust. "A little bit of antimatter goes a long way," said Schmidt.

Marshall engineers are currently building a High Performance Antimatter Trap, which will store antiprotons for a 10-day lifetime. The trap will be used in future antimatter experiments for space propulsion of the 21st century.

So, when will real-life adventure in distant galaxies premiere?

"Right now, no one knows which of the technologies we're developing will open the space frontier," said Lyles.

"What we do know is that we must push technology to achieve breakthroughs that are necessary to travel beyond our solar system," said Lyles. "I believe that some of the technologies we're working today could make it happen in the next century."

The writer, a contractor employed by ASRI, supports the Media Relations Office.

Correction

In the May 6 issue of the Marshall Star, Leigh Fitzgerald of BF20 was misidentified as Leiah Fitzgerald of EL33. The Marshall Star regrets the error.

"You Cannot be too Careful "
— Safety slogan submitted by
Steve Tucker, EP63

Solar thermal propulsion tests conclude

Rocket engines that tap the Sun's energy could dramatically reduce the cost of putting payloads, such as communications satellites, in orbit. A successful, four-year effort to mature technologies for solar thermal propulsion concluded last month at Marshall.

Critical system components, such as a solar concentrator, an engine and a propellant storage and feed system, were designed, developed and ground tested.

Most of the technologies had been demonstrated with tests of individual components, but this was the first time for them to be integrated and tested as a system.

A large liquid hydrogen tank with an innovative feed system was tested at Marshall to simulate a 30-day solar thermal mission.

Data gathered from the tests could have applications for missions to the Moon and Mars, as well as for boosting payloads to higher orbits. Test data indicates the technologies are mature enough to be demonstrated in a flight experiment.

Solar thermal propulsion systems would be less expensive, much simpler and more efficient than today's rocket engines. The Sun's energy is concentrated into an engine to heat propellant, which expands and produces thrust.

Photo by Terry Leibold

From left, Kevin Pedersen with the Propulsion Test Division and James Martin, Robin Flachbart, Leon Hastings and Harold Garrish of the Propulsion Research and Technology Division, celebrate concluding tests on the Solar Thermal Upper Stage Technology Demonstrator.

The consortium that led the effort for the Aerospace Industry Technology Program's Solar Thermal Upper Stage Technology Demonstrator included the Marshall Center; NASA's Glenn Research Center at Lewis Field in Cleveland, Ohio; the Air Force Research Laboratory at Edwards Air Force Base, Calif.; The Boeing Co. of Huntington Beach, Calif.; United Applied Technologies of Huntsville; Thiokol Propulsion, a division of Cordant Technologies Inc. of Salt Lake City, Utah; and the University of Alabama in Huntsville.

Photo by Dennis Olive

TABES' 99

Center Deputy Director Carolyn Griner opens the Space Symposium at the 15th annual Technical and Business Exhibition and Symposium (TABES) held Tuesday and Wednesday at the Von Braun Center.

Fastrac engine team receives NASA's quality award

The team of scientists and engineers that crafted the Fastrac rocket engine has received the NASA Administrator's Exemplary Continual Improvement Team Paper Award. The award was presented at the 14th Annual NASA Continual Improvement and Reinvention Conference on Quality Management in Alexandria, Va.

Designed and built at Marshall, the Fastrac engine is a 60,000-pound-thrust engine that will be used for the first powered flight of NASA's X-34 technology demonstrator. The Fastrac engine is less expensive than similar engines because of an innovative design approach that uses commercial, off-the-shelf parts and fewer of them. Fastrac uses common manufacturing methods, so building the engine is relatively easy and not as labor-intensive as manufacturing typical rocket engines.

NASA Administrator Daniel S. Goldin, Gen. John R. Dailey, acting deputy administrator, and Fred Gregory, associate administrator for Safety and Mission Assurance, selected Marshall's Fastrac 60K Product Development Team for best presentation of measurable results in the endeavor to make space transportation faster, better and cheaper. The conference is a forum to share best practices and lessons learned from quality management initiatives.

The Fastrac team shared techniques that have led to success in building the new engine, which could dramatically reduce the cost of boosting small payloads, weighing 500 pounds or less, to low-Earth orbit.

Blood pressure awareness month

May is High Blood Pressure Month and Marshall is participating in the observance by offering blood pressure screenings for employees.

This special emphasis in May is to raise awareness of all employees of the importance of monitoring blood pressure.

Studies have shown treatment can make a difference in reducing early death and illness for people with high blood pressure. This is especially true for individuals at the low end of what constitutes high blood pressure in the 90 to 104 diastolic range.

Employees may stop by the Medical Center in Bldg. 4249 any week day between noon-3 p.m. HEMSI paramedics assigned to Marshall will stop at the following designated buildings once during the month to perform blood pressure checks: 4203, 4755, 4207, 4666 and 4705.

Photo by Doug Stoffer

Community Leaders hear Stephenson

Center Director Art Stephenson, at right, briefs community leaders on Marshall activities during the Community Leaders Breakfast held May 13 at Marshall.

Upcoming Events

- ***Savings Bond Kickoff*** — The annual Savings Bond campaign kickoff will be held Thursday at 1:30 p.m. in Morris Auditorium. John Helmke, area manager of the U.S. Treasury Department Savings Bonds Marketing Office will be the keynote speaker. For more information, call Edwina Bressette at 544-8115.
- ***Marshall Association Luncheon*** — The Marshall Association's May luncheon will be May 25 at 11:30 a.m. at Marshall's West Picnic Pavilion. Center Director Art Stephenson will be the guest speaker. Lunch costs $5 and will consist of New Orleans style Jambalaya, desserts and sodas. Reservations can be made by e-mail to: efrem.hanson@msfc.nasa.gov
- ***Astronaut Applications —*** NASA is accepting applications for mission specialist and pilot astronaut candidates to join the Agency as it enters the era of the International Space Station and continues the exploration of space. Deadline to submit an application is July 1. An application package may be obtained by contacting the Astronaut Selection Office at (281) 483-5907, or writing to NASA-Johnson Space Center, Astronaut Selection Office, Mail Code AHX, Houston, TX, 77058-3696. Selection criteria and application forms are available electronically through the Astronaut Selection Office Website at http://www.jsc.nasa.gov ah/jscjobs aso ascan.htm
- ***"Windmills" Training Program —*** The Equal Opportunity Office is sponsoring the "Windmills Attitudinal Training Program" June 3 in Morris Auditorium. Sessions will be held 8-10 a.m., 10:30 a.m.-12:30 p.m., and 1:30-3:30 p.m. Richard K. Pimental, an expert on integrated disability management, return to work, workers' compensation, cost containment and attitude change, will discuss the perception of persons with disabilities, where these perceptions originated and how they affect behavior in the workplace. For more information, call Laura Groce at 544-9154.
- ***Program/Project Managers Training —*** A course to familiarize program and project managers with the new NASA Program and Project Management Process will be taught June 15-16 at Marshall. The eight-hour class is limited to 25 participants, signed up on a first-come basis. Civil service employees may register through AdminSTAR. For more information, call Stephanie Elliott at 544-7553.
- ***May Blood Drive*** — The American Red Cross will hold its monthly blood drive Friday from 8 a.m.-1:30 p.m. in Bldg. 4752. The schedule is: A-B, 11 a.m.; C-F, 10:30 a.m.; G-H, 10 a.m.; I–L, 9:30 a.m.; M-O, 9 a.m.; P-S, 8:30 a.m.; and T-Z, 8 a.m. If you are unable to make your appointed time, the Red Cross will be available until 1:30 p.m. Marshall employees who serve as blood donors without compensation will be authorized four hours of excused absence. Contractors will comply with their company's policy.
- ***Housing for Summer Students —*** Students at Marshall for summer educational programs have need of short-term lodging, particularly graduate students participating in the NASA Graduate Student Researchers Program. If interested in hosting or renting a room to a student during the summer or for short-term summer workshops, call Frank Brannon in the Education Programs Office at 544-5920.
- ***AIAA Awards Dinner Set*** — The American Institute of Aeronautics and Astronautics will present its Alabama/Mississippi Section Awards May 25 at 6 p.m. at the Holiday Inn, Research Park. Marshall employees and contractors are represented. Call Tony Springer at 961-4002, for reservations at $18 per person.

Employee Ads

Miscellaneous

★ Dresses, square dancing and evening, size 10. 828-4251
★ British leather 3-piece living room suite, $650. 722-9455
★ Longaberger baskets, liners and tie-ons. 353-5106
★ Queen-size waterbed, medium oak color, includes base, headboard, liner, padded rails, heater, $75. 880-6267
★ Washing machine, $80; color TV, $45; patio set, $40; freezer, $60; word processor, $75. 852-7982
★ Firewood, hardwood, $25 per pickup load. 882-2076
★ Queen Anne cherry coffee table, $45. 971-0048, before 7 a.m./after 6 p.m.
★ Rugrats digital watch, $10; 858-3339, 24-hr. voicemail
★ Sears stair stepper, $100; Body-by-Jake thigh machine, $50; many exercise video tapes, $15. 882-7084
★ Used golf balls, $7.50 per dozen or 65 cents. Pager 517-0657
★ Treadmill Roadmaster Vita Master Pro 1-1/2HP, $200; solid oak roll top computer desk, $600. 851-0871
★ '97 Astro 20' fish/ski boat, 200HP, EFI, 56-lb. troll motor, fishfinders, canvas, galvanized trailer, $18,800. 922-1169
★ Floor model Magnavox TV, $100. 882-1097
★ 1996 mobile home, 16x80, beige/cream/gray, 3 BRs, 2 baths, take over payments, $24,000 payoff. 828-3309
★ 1996 Starcraft pop-up camper, sleeps 6, refrigerator, a/c, potty, shower, stove, water heater, $5,900. 771-0003
★ 1993 motorcycle, Yamaha, Virago, XV-750, black, 16K miles, $4,000. 837-2461
★ Trolling motor, Minn-Kota Turbo 555, foot control, 33-lb. thrust, $60. 379-3606
★ Lazy Boy sectional sleeper sofa, blue, has recliner on end, $650. 837-6838
★ Tiller, American's best, 5HP, $75. 880-5853
★ Nordic Track exercise machine, $135; entertainment center, solid birch, 6'x6.5', $175. 859-4833
★ 1996 Kawasaki 1100Zxi jet ski; 1995 Yamaha 701 Waveradier, double galvanized trailer, $7,200. 883-2919
★ Pair of AKAI speakers, 3-way, 130 watts, 12"x15"x27", 30T020KH2. 881-4566
★ Boat motor and trailer 16' Cobia, runabout, 65HP Mercury, needs work, best offer. 233-0705

Vehicles

★ 1990 Mitsubishi Mirage EXE, 4-door, 5-speed, AM/FM cassette, $2,300 obo. 721-0526
★ 1982 Honda Accord LX, hatchback, 5-speed, A/C, radio, 92K miles, owners/service manuals, $1,200 obo. 859-0083
★ 1997 Honda Accord LX, 4-door, auto, PW/PL/cruise, AM/FM cassette 29K miles, $15,000. 890-0873
★ 1988 Mercury Sable wagon, 3.8L engine, all power seats, 280K miles, $2,100 obo. 828-6213
★ 1995 Ford Ranger, XLT, 4-cylinder, 5-speed with bedliner, $6,500 obo. 650-5558
★ 1995 Buick Park Avenue, Ultra, 80K miles, adriatic blue, blue leather, tape/CD radio, $12,995. 721-0710
★ 1968 Volkswagen Beetle, stereo, $1,950. 880-5853
★ 1988 Ford LTD Victoria LX, 5L, V-8, PS/PB/PW/PDL, cruise, 120K miles, $1,800. 729-1047
★ 1989 Honda Accord, LXi, auto, 4-door, loaded, power sunroof, 132K miles, $3,500. 721-9005
★ 1996 Chrysler Town & Country van, memory seats, keyless entry, leather, $16,995. 852-6952

Free

★ Fill dirt, some top soil, you load and haul. 881-2676

Lost

★ King Cobra graphite senior 5 iron, RSA, 5-10, Hooper. 883-2948

Found

★ Ring in lobby of Bldg. 4203. 544-7858

Center Announcements

☞ ***Take Our Children to Work* —** The T-shirt deadline for Marshall's Take Our Children to Work Day has been extended through Friday. Register and order T-shirts electronically at: http://ntf-1.msfc.nasa.gov/toctwd.nsf

☞ ***Sickle Cell Walk* —** The Equal Opportunity Office is sponsoring a Marshall team for the Annual Sickle Cell Anemia Walk-A-Thon being held Saturday from 9-11 a.m. Registration starts at 7:30 a.m. at the Huntsville Museum of Art on Church Street. To register, call Jeneene Sams at 544-6816.

☞ ***MOO Retirees Meet* —** The Management Operations Office (MOO) retirees will meet for breakfast/lunch on May 27 at 10 a.m. at the Cracker Barrel in Madison. All present or former MOO employees are welcome. For more information, call 539-0042.

☞ ***Rumba and Polka Lessons* —** The MARS Ballroom Dance Club will offer rumba and polka lessons May 24 from 7-8 p.m. in the Parish Hall of St. Stephen's Episcopal Church at 8020 Whitesburg Drive. Lessons are $6 biweekly for members and guests.

☞ ***Bahamas Vacation Special*** — Special T Travel of Orlando, Fla., is offering a Bahamas vacation special for $189 per person, based on double occupancy. The offer is open to Marshall employees, retirees and on-site contractors. This package includes a round-trip cruise from Ft. Lauderdale, Fla., to Freeport, Grand Bahamas, and four days, three nights deluxe accommodations at the Island Palm Resort. Hotel tax, U.S. departure tax and transportation to Florida are not included. A deposit of $183 by May 28 is required for this exclusive offer, but travel dates are good for one full year. Call Special T Travel at 800-393-3191, NASA reference is MF9202.

☞ ***MARS Golf Club Tournament* —** A golf tournament will be held June 5 at the Fox Run Golf Course in Meridianville, Ala. The format will be Skins with two 2-player teams in each foursome. Cost to enter is $4. Entry deadline is May 28. The event is open to all NASA employees, retirees and on-site contractors. To enter, call Lee Foster at 544-1589.

☞ ***MARS Tennis Tournament*** — The MARS Tennis Club is holding an Open Doubles Tournament June 5 at 7:30 a.m. at Marshall's tennis courts. Doubles teams may call Amy Hemken at 544-7097 to register.

Job Opportunities

The following competitive placement plan announcements are open to Marshall employees and NASA employees stationed at Marshall.

CPP 99-39-KP, AST, Structural Materials, GS-806-15, Engineering Directorate, Materials, Processes & Manufacturing Department. Closes May 24.

CPP 99-56-CP, AST, Technical Management, GS-801-14, Science Directorate, Office of the Director. Closes May 24.

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